



# Cyclosporiasis



## What is cyclosporiasis?

Cyclosporiasis is an intestinal infection caused by a parasite composed of one cell—too small to be seen without a microscope—called *Cyclospora cayetanensis*. The parasite is commonly found in tropical and subtropical regions all over the world and has been identified as one of many causes of “traveler’s diarrhea”. These spores are found in food or water contaminated with feces (poop). People become infected with *Cyclospora* by ingesting the infective form of the parasite. An infected person sheds non-infective *Cyclospora* spores in the feces and, under favorable environmental conditions, the spores become infective.

## How common is cyclosporiasis?

Cyclosporiasis occurs in many countries, but it seems to be most common in tropical and subtropical regions. In areas where cyclosporiasis has been studied, the risk for infection is seasonal. In the US, foodborne outbreaks of cyclosporiasis since the mid-1990s have been linked to various types of imported fresh produce, including raspberries, basil, snow peas, and mesclun lettuce. According to the Centers for Disease Control and Prevention (CDC), two cyclosporiasis outbreaks occurred during June-August 2013 in the US. Results from outbreak investigations concluded that one outbreak was linked to a salad mix and the other was associated with fresh cilantro. A total of 631 cases of cyclosporiasis were reported from 26 states. Eight percent (8%) of ill individuals became hospitalized, and no deaths were reported.

## How do people get infected with *Cyclospora*?

Cyclosporiasis occurs when food or water that was contaminated with feces is consumed, especially in areas where cyclosporiasis is endemic (found). Since *Cyclospora* needs time after being passed in a bowel movement to become infectious for another person, it is unlikely that *Cyclospora* is passed directly from one person to another.

## What are the symptoms of cyclosporiasis?

The time between becoming infected and becoming sick is usually about 1 week. *Cyclospora* infects the small intestine (bowel) and usually causes watery diarrhea, with frequent, sometimes explosive, bowel movements. Other common symptoms include loss of appetite, weight loss, stomach cramps/pain, bloating, increased gas, nausea, and fatigue. Vomiting, dehydration, body

aches, headache, fever, and other flu-like symptoms may also be noted. Symptoms may seem to go away and then return one or more times (relapse). If not treated, the illness may last for a few days to a month, or longer. Some people who are infected with *Cyclospora* may not have any symptoms.

### How is *Cyclospora* infection diagnosed?

*Cyclospora* infection is diagnosed by examining stool (poop) specimens. Diagnosis can be difficult because even persons who are showing symptoms might not shed enough *Cyclospora* spores in their stool to be readily detectable by laboratory examinations. Therefore, patients might need to submit several specimens collected on different days.

### How can cyclosporiasis be treated?

Most people who have healthy immune systems will recover without treatment. People who have diarrhea should rest and drink plenty of fluids. Anti-diarrheal medicine may also help reduce diarrhea, but a health care provider should be consulted before such medicine is taken. People who are in poor health or who have weakened immune systems may be at higher risk for severe or prolonged illness.

### What can be done to prevent *Cyclospora* infection?

The best way to prevent cyclosporiasis is to avoid food or water that may have been contaminated with feces. Treatment with chlorine or iodine is unlikely to kill *Cyclospora* oocysts. The CDC encourages consumers to follow general food safety recommendations:

- Wash your hands with soap for at least 20 seconds. Make sure to wash your hands after going to the bathroom, after changing diapers, before preparing or eating foods or beverages,

and after handling an animal or animal waste.

- Wash cutting boards, dishes, utensils, and counter tops with soap and hot water between the preparation of raw meat, poultry, and seafood products and the preparation of fruits and vegetables that will not be cooked.
- Wash all fruits and vegetables thoroughly under running water before eating, cutting, or cooking. Fruits and vegetables that are labeled “prewashed” do not need to be washed again. Scrub firm fruits and vegetables, such as melons and cucumbers, with a clean produce brush.
- Refrigerate cut, peeled, or cooked fruits and vegetables as soon as possible, or within 2 hours. Store fruits and vegetables away from raw meat, poultry, and seafood.

When traveling out of the country:

- Avoid eating foods or drinking beverages purchased from street vendors or other establishments where unhygienic conditions are present.
- Avoid eating raw or undercooked meat and seafood.
- Avoid eating raw fruits and vegetables unless you have washed and peeled them yourself.
- Drink “safe beverages” like bottled beverages, hot tea or coffee, or properly treated or boiled water.
- Brush teeth with bottled, properly treated or boiled water.

No vaccine for cyclosporiasis is available so prevention is key.

*For more information, please contact:*

County of San Bernardino  
Department of Public Health  
Communicable Disease Section

[www.sbcounty.gov/dph/publichealth](http://www.sbcounty.gov/dph/publichealth)  
(800) 722-4794

*To report a possible foodborne illness, contact:*

County of San Bernardino  
Department of Public Health  
Division of Environmental Health Services

[www.sbcounty.gov/dph/dehs](http://www.sbcounty.gov/dph/dehs)  
(800) 442-2283